

Claims

1. A solid oxide fuel cell comprising:  
a substrate;  
an electrolyte disposed on one surface of the substrate;  
and

at least one electrode element comprising an anode and  
a cathode disposed on the same surface of the electrolyte and  
with a predetermined space therebetween.

2. The solid oxide fuel cell according to Claim 1, which  
further comprises

another electrolyte disposed on the other surface of  
the substrate, and

another electrode element comprising an anode and a  
cathode disposed with a predetermined space therebetween on the  
same surface of the electrolyte which is disposed on the other  
surface of the substrate.

3. The solid oxide fuel cell according to Claim 1 or  
2, which comprises a plurality of such electrode elements.

4. The solid oxide fuel cell according to Claim 3, which  
furtherer comprises an interconnector for connecting the  
plurality of electrode elements.

5. The solid oxide fuel cell according to Claim 3 or  
4, wherein a groove is formed in the electrolyte to partition  
between adjacent electrode elements.

6. The solid oxide fuel cell according to Claim 3 or 4, wherein the electrolyte is separated from the adjacent electrode elements.

7. The solid oxide fuel cell according to Claim 6, wherein an insulating material is disposed between adjacent electrolytes.

8. The solid oxide fuel cell according to any one of Claims 1 to 7, wherein the electrolyte is formed by printing.

9. The solid oxide fuel cell according to any one of Claims 1 to 7, wherein the electrolyte is formed into a plate-like shape, and the electrolyte is attached to the substrate by adhesive.

10. The solid oxide fuel cell according to Claim 5, wherein the groove cuts through the electrolyte and reaches the substrate.

11. The solid oxide fuel cell according to any one of Claims 1 to 10, wherein the electrode element is formed in such a manner that one of the electrodes is surrounded by another electrode with a predetermined space therebetween.

12. A solid oxide fuel cell comprising a plurality of single cells each having an electrolyte, an anode, and a cathode, the solid oxide fuel cell further comprising a

substrate for supporting the plurality of single cells;  
the electrolyte of each single cell being disposed on  
the substrate with predetermined space therebetween.

13. The solid oxide fuel cell according to Claim 12,  
which further comprises an interconnector for connecting the  
plurality of single cells.

14. The solid oxide fuel cell according to Claim 12  
or 13, wherein each electrolyte is formed by printing.

15. The solid oxide fuel cell according to Claim 12  
or 13, wherein each electrolyte is formed into a plate-like shape,  
and each electrolyte is attached to the substrate by adhesive.

16. The solid oxide fuel cell according to any one of  
Claims 1 to 15, wherein the substrate is formed from a ceramic  
material.